

IN THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A transmission system for transmitting datawords via a multicarrier signal (11) from a transmitter (10) to a receiver (12), the transmitter (10) comprising:
a generator (20) for generating for each dataword (19) ~~a number of~~ alternative digital sequences (21); and
the transmitter (10) further comprising a selector (22) for selecting ~~the~~ an alternative digital sequence with ~~the~~ a lowest peak power value (23) for transmission to the receiver (12),
characterized in that wherein the generator (20) is ~~embodied so as~~ operable to combine mutually different digital words with the dataword (19) ~~in order~~ to form the alternative digital sequences (21).

2. (Currently Amended) A transmission system according to Claim 1, ~~characterized in that~~ wherein the generator (20) comprises:
an augmentor (40) for generating for each dataword (19) ~~a number of~~ intermediate sequences (41) by combining the digital words with the dataword (19); and
the generator (20) further comprising a scrambler (42) for scrambling the intermediate sequences (41) ~~in order~~ to form the alternative digital sequences (21).


3. (Currently Amended) A transmission system according to Claim 2, ~~characterized~~
~~in that wherein~~ the augmentor (40) is ~~embodied so as~~ operable to generate for each dataword (19)
 2^r intermediate sequences (41) by combining all possible digital words of length r with the
dataword (19).

4. (Currently Amended) A transmission system according to Claim 1, ~~characterized~~
~~in that wherein~~ the generator (20) comprises:
a splitter (60) for splitting the dataword (19) and the digital words into fragments (61);
and
the generator (20) further comprising a combiner (62) for combining the fragments (61)
~~in order~~ to form the alternative digital sequences (21).

5. (Currently Amended) A transmission system according to Claim 1, ~~characterized~~
~~in that wherein~~ the selector (22) comprises:
an Inverse Discrete Fourier Transformer (50) for calculating for each alternative digital
sequence ~~the~~ an Inverse Discrete Fourier Transform (IDFT)[[.]];
the selector (22) further comprising means (52) for determining for each alternative
digital sequence ~~the~~ a maximum of the calculated IDFT values (51); and
the selector (22) also comprising means (54) for selecting ~~the~~ an alternative digital
sequence with ~~the~~ a lowest maximum (23) for transmission to the receiver (12).

6. (Currently Amended) A transmitter (10) for transmitting datawords via a multicarrier signal (11) to a receiver (12), the transmitter (10) comprising:

a generator (20) for generating for each dataword (19) ~~a number of~~ alternative digital sequences (21); and

 ~~the transmitter (10) further comprising~~ a selector (22) for selecting the an alternative digital sequence with the a lowest peak power value (23) for transmission to the receiver (12),

~~characterized in that wherein~~ the generator (20) is ~~embodied so as~~ operable to combine mutually different digital words with the dataword (19) ~~in order~~ to form the alternative digital sequences (21).

7. (Currently Amended) A transmitter according to Claim 6, ~~characterized in that~~ wherein the generator (20) comprises:

an augmentor (40) for generating for each dataword (19) ~~a number of~~ intermediate sequences (41) by combining the digital words with the dataword (19); and

~~the generator (20) further comprising~~ a scrambler (42) for scrambling the intermediate sequences (41) ~~in order~~ to form the alternative digital sequences (21).

8. (Currently Amended) A transmitter according to Claim 7, ~~characterized in that~~
wherein the augmentor (40) is ~~embodied so as~~ operable to generate for each dataword (19) 2^r
intermediate sequences (41) by combining all possible digital words of length r with the
dataword (19).

9. (Currently Amended) A transmitter according to Claim 6, ~~characterized in that~~
wherein the generator (20) comprises:
a splitter (60) for splitting the dataword (19) and the digital words into fragments (61);
and
the generator (20) further comprising a combiner (62) for combining the fragments (61)
~~in order~~ to form the alternative digital sequences (21).

10. (Currently Amended) A transmitter according to Claim 6, ~~characterized in that~~
wherein the selector (22) comprises:

an Inverse Discrete Fourier Transformer (50) for calculating for each alternative digital
sequence ~~the~~ an Inverse Discrete Fourier Transform (IDFT)[[.]];:

the selector (22) further comprising means (52) for determining for each alternative
digital sequence ~~the~~ a maximum of the calculated IDFT values (51); and

the selector (22) also comprising means (54) for selecting the alternative sequence with
the a lowest maximum (23) for transmission to the receiver (12).

11. (Currently Amended) A method of transmitting datawords via a multicarrier signal (11) from a transmitter (10) to a receiver (12) comprising the steps of:

[[-]] generating for each dataword (19) ~~a number of~~ alternative digital sequences (21);

Bl
Cont
and

[[-]] selecting ~~the~~ an alternative digital sequence with ~~the~~ a lowest peak power value (23) for transmission to the receiver (12),

~~characterized in that the step of generating the alternative sequences comprises the step of:~~

~~— combining mutually different digital words with the dataword (19) in order to form the alternative sequences (21)~~

wherein the step of generating the alternative digital sequences comprises the step of combining mutually different digital words with the dataword to form the alternative sequences.

12. (Currently Amended) A method of transmitting datawords via a multicarrier signal (11) according to Claim 11, ~~characterized in that~~ wherein the step of ~~generating the alternative sequences~~ combining mutually different digital words with the dataword comprises the steps of:

[[-]] generating ~~for each dataword (19) a number of~~ intermediate sequences (41) by combining ~~mutually different~~ the digital words with the dataword (19),

[[-]] scrambling the intermediate sequences (41) ~~in order~~ to form the alternative digital sequences (21).

13. (Currently Amended) A method of transmitting datawords via a multicarrier signal (11) according to Claim 12, ~~characterized in that~~ wherein ~~for each dataword (19)~~ 2^r intermediate sequences (41) are generated by combining all possible digital words of length r with the dataword (19).

14. (Currently Amended) A method of transmitting datawords via a multicarrier signal (11) according to Claim 11, ~~characterized in that~~ wherein the step of ~~generating the alternative sequences~~ combining mutually different digital words with the dataword comprises the steps of:

[[-]] splitting the dataword (19) and the digital words into fragments (61),

[[-]] combining the fragments (61) ~~in order~~ to form the alternative sequences (21).

15. (Currently Amended) A method of transmitting datawords via a multicarrier signal (11) according to Claim 11, ~~characterized in that~~ wherein the step of selecting ~~the~~ an alternative sequence with ~~the~~ a lowest peak power value (23) comprises the steps of:

[[-]] calculating for each alternative sequence ~~the~~ an Inverse Discrete Fourier Transform (IDFT),

[[-]] determining for each alternative sequence ~~the~~ a maximum of the calculated IDFT values (51),

[[-]] selecting ~~the~~ an alternative sequence with ~~the~~ a lowest maximum (23) for transmission to the receiver (12).


16. (New) A transmission system according to Claim 1, further comprising a receiver, wherein the receiver is operable to:

receive the alternative digital sequence; and

restore the dataword from the alternative digital sequence.

17. (New) A transmission system according to Claim 2, further comprising a receiver, wherein the receiver is operable to:

- receive the alternative digital sequence;
- descramble the alternative digital sequence; and
- restore the dataword by deleting the digital word from the descrambled alternative digital sequence.



18. (New) A method of transmitting datawords via a multicarrier signal according to Claim 11, further comprising the steps of:

- receiving the alternative digital sequence; and
- restoring the dataword from the alternative digital sequence.

19. (New) A method of transmitting datawords via a multicarrier signal according to Claim 12, further comprising the steps of:

- receiving the alternative digital sequence;
- descrambling the alternative digital sequence; and
- restoring the dataword by deleting the digital word from the descrambled alternative digital sequence.